

A 1995 Search for *Spiranthes diluvialis* in SE Wyoming

Preliminary Report

Prepared for:

**Bureau of Land Management
Wyoming State Office
Attention: Jeff Carroll (WY-903)
Cheyenne, Wyoming 82003-1828**

Submitted by:

**Donald L. Hazlett, Botanist
Box 345, Pierce, CO 80650**

October 1, 1995

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240 W Prospect Rd
Fort Collins CO 80526

October 1, 1995

Bureau of Land Management
Wyoming State Office
Attention: Jeff Carroll (WY-903)
Cheyenne, Wyoming 82003-1828

Dear Jeff:

Enclosed is an original and 1 copy of a report entitled "A 1995 Search for *Spiranthes diluvialis* in SE Wyoming". This is the preliminary report as required by the BLM Order for services Number K910P50199. This order is for \$2,500.00, involving field searches during 2 years. This report is in fulfillment of the first year of this contract.

During 1995 portion of this contract the search expenses were \$1,350.00. These were as follows:

I. Salary

\$100.00/8 hour day x 10 days	\$1,000.00
(Actually spent as eight 10-hour days)	

II. Travel Expenses

4 trips/1200 miles/ @ \$0.20/mile	\$ 240.00
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III. Food, Lodging and Supplies

Lodging: 3 nights @ \$25.00/day	\$ 75.00
Food: 7 days @ \$5.00/day	\$ 35.00

TOTAL	\$1,350.00
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The 1996 expenses will follow these same rates.

I was pleased that I was able to be contracted by the BLM for this survey. I remain optimistic about locating *Spiranthes diluvialis* during the 1996 or second portion of this contract and am willing to undertake other plant surveys that may be required by your office.

If you have any questions, please let me know.

Sincerely


Donald L. Hazlett, ethnobotanist

p.s. Copy of the 1995 was given to Ron Hartman at RMH.

A 1995 Search for *Spiranthes diluvialis* in Southeastern Wyoming

Donald L. Hazlett

INTRODUCTION

Spiranthes diluvialis Shev. (Orchidaceae) or the Ute lady's tresses orchid is a plant species that is federally listed as threatened by the USFWS (¹Fertig, 1994). The Wyoming Bureau of Land Management Office had taken the lead in supporting search efforts to locate additional populations of this rare species. This report identifies the locations that were searched in 1995 and fulfills half of the contracted time. The second half of this contract (additional surveys) will be made in 1996.

METHODS

The objective of this search was to search appropriate habitats for this threatened orchid. On August 10, the first day of this contract, a visit was made to a known location of this orchid. Over 20 individuals were located at the Bear Creek location. This provided valuable training in terms of the type of habitat to look for and in regard to field identification of this species.

This search for the Ute lady's tresses orchid was done in cooperation with Ronald Hartman (curator) and Ernie Nelson (manager) at the Rocky Mountain Herbarium, University of Wyoming, Laramie, WY. The Rocky Mountain Herbarium (RMH) is very actively conducting floristic surveys throughout the state of Wyoming, including previous searches for this orchid. To avoid revisiting the same areas, the RMH provided maps of areas that had already been searched. With these maps and with a complete set of maps provided by Jeff Carrol of the BLM office, the 1995 surveys were made only in new, previously unsearched locations.

A total of 7 long field days (10-12 hours) and 1 full day to summarize the survey information were spent on this portion of the contract. As is often the case, considerable time was sometimes spent in securing permission from land owners. A more intense effort was made to secure permission if visual evidence indicated that a particular riparian area appeared to be appropriate habitat for this orchid. Whenever appropriate habitats were found and only if permission were obtained, a riparian area was surveyed for *Spiranthes diluvialis*. Unless otherwise indicated, all surveys were made on foot.

¹Fertig, W. 1994. Wyoming Rare Plant Field Guide. Joint Publication of the BLM, U.S. Fish & Wildlife, USFS, National Park Service, Wyoming Game & Fish Department and The Nature Conservancy.

RESULTS

The riparian areas in all or in portions of 69 land sections located in 4 counties (Goshen WY, Platte WY, Laramie WY and Banner NE) were surveyed, but no populations of *Spiranthes diluvialis* were located. The specific County, Township, Range and Section numbers of the locations that were surveyed are given on Table 1. These sections are also indicated on Maps 1-9. Latitude and Longitude were not summarized here, but if needed could easily be obtained.

In support of the ongoing floristic survey at the Rocky Mountain Herbarium 50-60 plant collections were made as these areas were surveyed for this rare orchid. These specimens will be archived at the Rocky Mountain Herbarium.

DISCUSSION

Although unsuccessful in discovering additional populations this first year has provided valuable experience in regard to when and where to search for this rare orchid. During August/September of 1996 (the second half of this contract) it should be possible to survey another 50-60 sections of land. As in 1995, the 1996 search will focus on areas that have not previously been searched and that appear to be the most appropriate habitat for *Spiranthes diluvialis*.

Table 1. Locations in southeastern Wyoming surveyed for *Spiranthes diluvialis* during August/September, 1995.

Date	County	T./R./Sec.	Land Type	Permission
8/10	Goshen	T20N/R63W/15	Private	Yes
	Goshen	T20N/R63W/16	State	Yes

The riparian areas of Fox Creek in these 2 sections were surveyed on foot by Ernie Nelson, Jeff Carroll and Don Hazlett. Permission to collect on private land was from Howard Kaufman. A bog orchid (*Platanthera* sp.) and Indian grass (*Sorghastrum nutans*) were noteworthy collections from this area. These sections are labeled as "1" on Map 1.

8/10,11	Goshen	T27N/R62W/36	State	Yes
	"	T27N/R62W/27,34,35	Private	Yes
	"	T27N/R62W/15,22	"	Yes

The riparian areas of Rawhide Creek in these 2 sections were surveyed on foot by Ernie Nelson and Don Hazlett. Permission to collect was from Mark Morel. Noteworthy plant species were bur-reed (*Sparganium emersum*) in a marsh and a prairie clover (*Dalea cylindriceps*) in sandy soils. These sections are labeled as "2" on Map 2.

8/10,11	Goshen	T28N/R62W/19	Private	Yes
	"	T27N/62W/05	Private	Yes

The riparian areas of Rawhide Creek in these sections were surveyed on foot by Ernie Nelson and Don Hazlett. Permission to collect was from John Patrick of Patrick Brothers Ranch. These sections are also labeled as "2" on Map 2.

8/17	Platte	T23N/R70W/10	Private	No
	"	T23N/R70W/16,30	State	Yes
	"	T23N/R70W/12,13,24,25	BLM	Yes

Riparian areas of George, Reed, and Slade Creeks as well as unnamed headwater tributaries to Sybille Creek and the Laramie River were surveyed. The survey on private land was visual. Noteworthy plant species collected from BLM land were a viscous ground cherry (*Physalis hederifolia*) and a Centaury gentian (*Centaureum exaltatum*). These sections are labeled as "4" on Map 3.

Date	County	T./R./Sec.	Land Type	Permission
8/18	Laramie	T17N/R66W/01-06	Private	Yes
	"	T17N/R65W/04-06	Private	Yes

Riparian areas along Horse Creek were surveyed from the road only and were considered as unlikely habitat for *Spiranthes*. Because of the well channeled creek and heavily wooded banks, these areas were not searched on foot. These sections are labeled as "0" on Map 4.

8/18	Laramie	T18N/R64W/26,28	State	Yes
8/24	"	T18N/R64W/23,27,29	Private	Yes
8/24	"	T18N/R65W/24,25,34-36	Private	Yes

Riparian areas along Horse and Spring Creek in these sections were surveyed on foot. Permission was given by Pedro, the caretaker of this land owned by John Etchepare and by Diana Kirkbride, owners of the land in the eastern sections. The banks of Horse Creek in these sections had less dense woody vegetation than in the visually surveyed area further East. Woody vegetation included willows (*Salix*), dogwood (*Cornus*), and box elder (*Acer negundo*). Noteworthy plant species collected here include a loosestrife (*Lysimachia ciliata*), and hops (*Humulus lupulus*). These sections are labeled as "5" on Map 5.

8/24	Laramie	T17N/R64W/09,10	Private	Yes
8/25	"	T17N/R64W/03	"	Yes
8/25	"	T17N/R64/34	State	Yes

Riparian areas along the margins of Sprager Creek and tributaries to this creek were searched on foot. Permission was given by the land owner, David Hansen, who accompanied me during the search of the 24th. He was very knowledgeable and interested in the flora on his property. Noteworthy plant species included the bog orchid (*Platanthera* sp.) and *Epilobium palustre*. Both of these species were very common along this stretch of Sprager Creek. These sections are also labeled as "5" on Map 5.

8/25	Laramie	T14N/R62W/13 (Lodgepole)	Private	No
	"	T14N/R61W/18 (Lodgepole)	Private	No
	"	T15N/R61W/31 (Spring)	Private	No
	"	T15N/R62W/36	State	Yes
	"	T16N/R62W/36	State	Yes
	Banner, NE	T17N/R59W/28-30	Private	No
	Laramie	T17N/R60W/27,28	Private	No

Visual surveys of these "mapped" creek areas were made. However, even the mapped Lodgepole and Spring Creek areas were dry and did not have appropriate *Spiranthes* habitat. These sections are labeled as "6" on Maps 6 and 7.

Date	County	T./R./Sec.	Land Type	Permission
9/09	Laramie	T17N/R63W/O4	Private	Yes
	"	T18W/R63W/25,25,33-35	Private	Yes
	"	T18N/R63W/32,36	State	Yes

Permission to survey was granted by Chip Harding, land owner of these section. Surveys were made along Little Horse, Cow, North and Middle Creeks. In Section 04, near the Harding residence, *Lobelia siphilitica* was very common. These sections are labeled as "7" on Map 8.

9/09	Laramie	T18N/R62W/8-17,22	Private	Yes
	"	T18N/R62W/13-15 (parts)	State	Yes

Riparian areas along Horse, Herrick and Little Horse Creeks in these sections were surveyed. Several miles west of Meriden Horse Creek is diverted for irrigation. This diversion has apparently contributed to the dominance of *Phragmites australis* along Horse Creek and its tributaries in many stream sections east of Highway 85. Permission was granted by Mrs. Irvin J. Petsches, land owners in this area. These sections are labeled as "8" on Map 9.

9/09	Laramie	T15N/R63W/31	Private	Yes
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The Riparian area in section 31 was surveyed with permission of the land owner. A population of at least 200 individuals of *Guara neomexicana* var. *coloradensis*. I informed the land owned (see enclosed letter) that this plant occurred on his property. This section is labeled with a "9" on Map 7. This is on the same map with "6" labels to indicate that at this time of year Lodgepole creek was nearly dry 6-7 miles southeast of the area where this butterfly gaura was found. Perhaps Thomas Reservoir had an important role in reducing the flow of Lodgepole Creek further to the east.

Map 1

BLM EDITION 1993
SURFACE MANAGEMENT STATUS

Wyoming
Chugwater

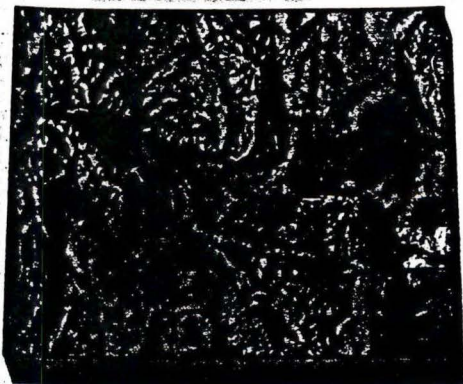


1:100,000-scale topographic map showing:

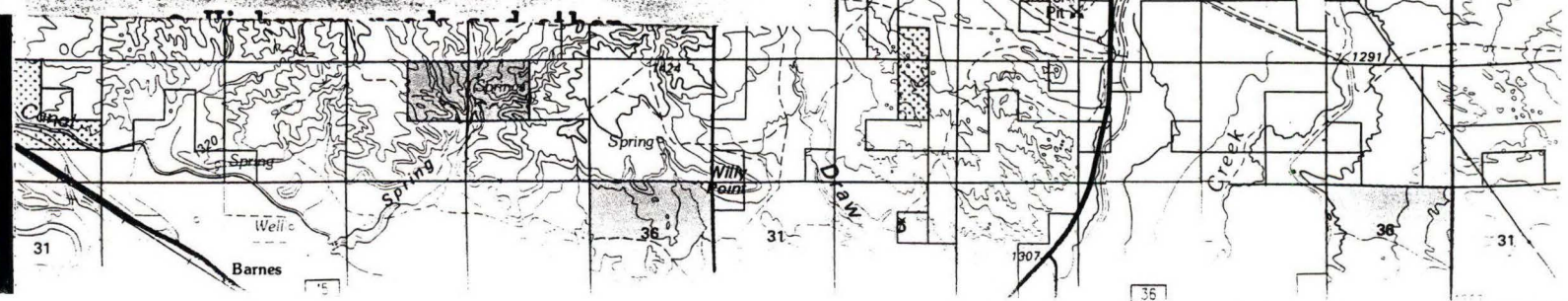
Map 2

BLM EDITION 1994
SURFACE MANAGEMENT STATUS

Wyoming
Torrington

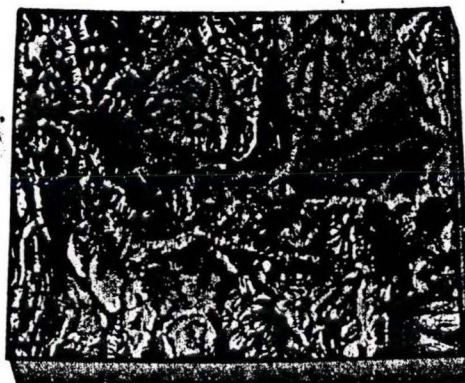


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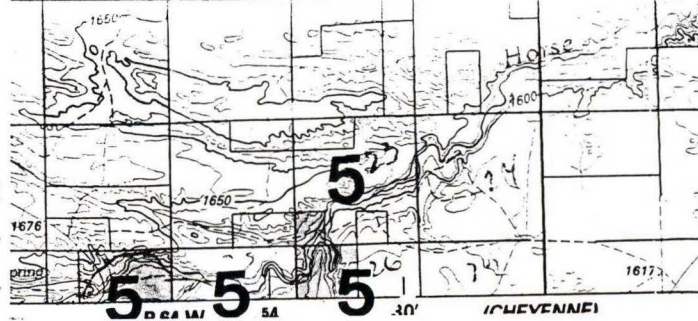


575	510000mE	R 67 W	600	R 66 W	52	45'	625	R 65 W	53	650
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131

Wyoming Chugwater



Map 5

R 65 W 53

650

5

5

5

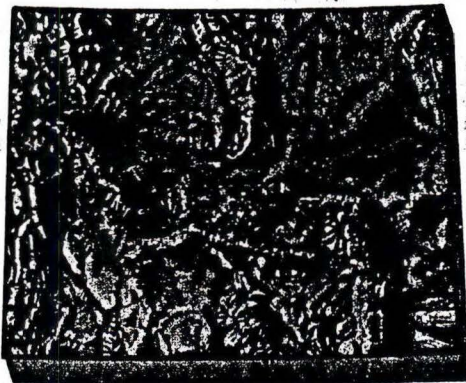
R 64 W 675

54

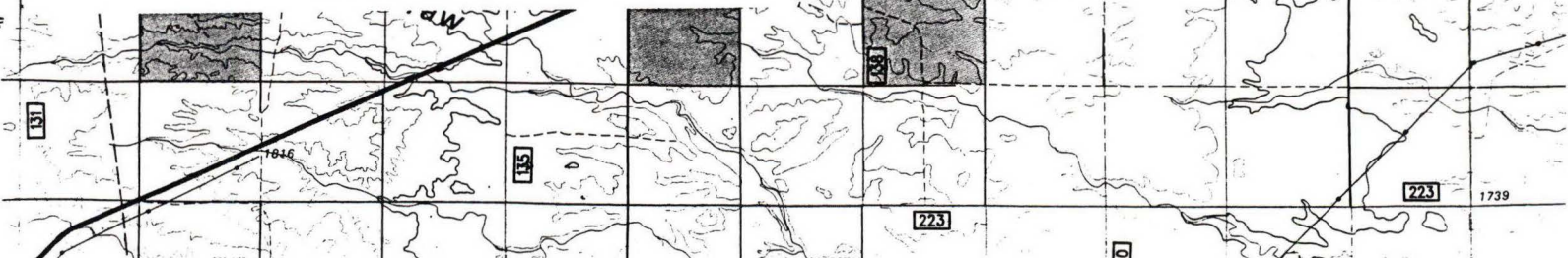
30' (CHUGWATER)

BLM EDITION 1994
SURFACE MANAGEMENT STATUS

Wyoming Cheyenne



1:100,000-scale topographic map showing:

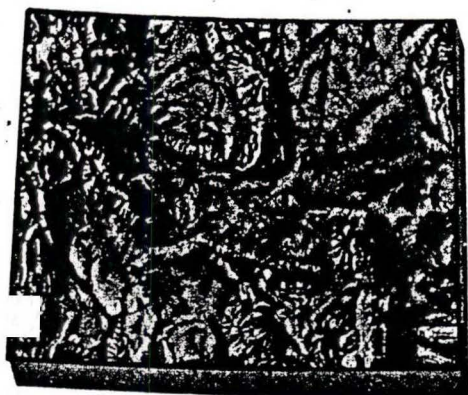


1994

Wyoming



Cheyenne

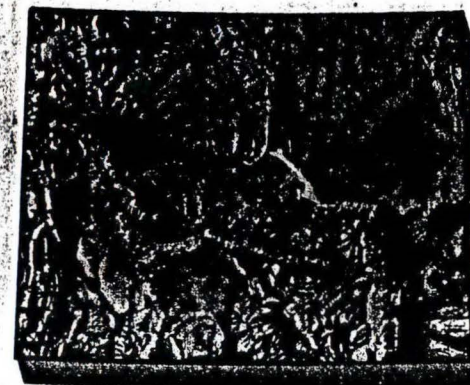


This is a topographic map of the Kimball, Nebraska area. The map shows the Kimball River flowing from the northwest towards the southeast, where it meets the Kimball Reservoir. The terrain is characterized by rolling hills and valleys, with contour lines indicating elevations ranging from approximately 1539 to 1609 feet. The map is overlaid with a grid showing section numbers (1, 6, 31, 36) and township/range coordinates (T 15 N, R 20 W). Key features include the town of Kimball, the Kimball Reservoir, and the Kimball River. The map is labeled 'WYOMING NEBRASKA' and 'PACIFIC'.

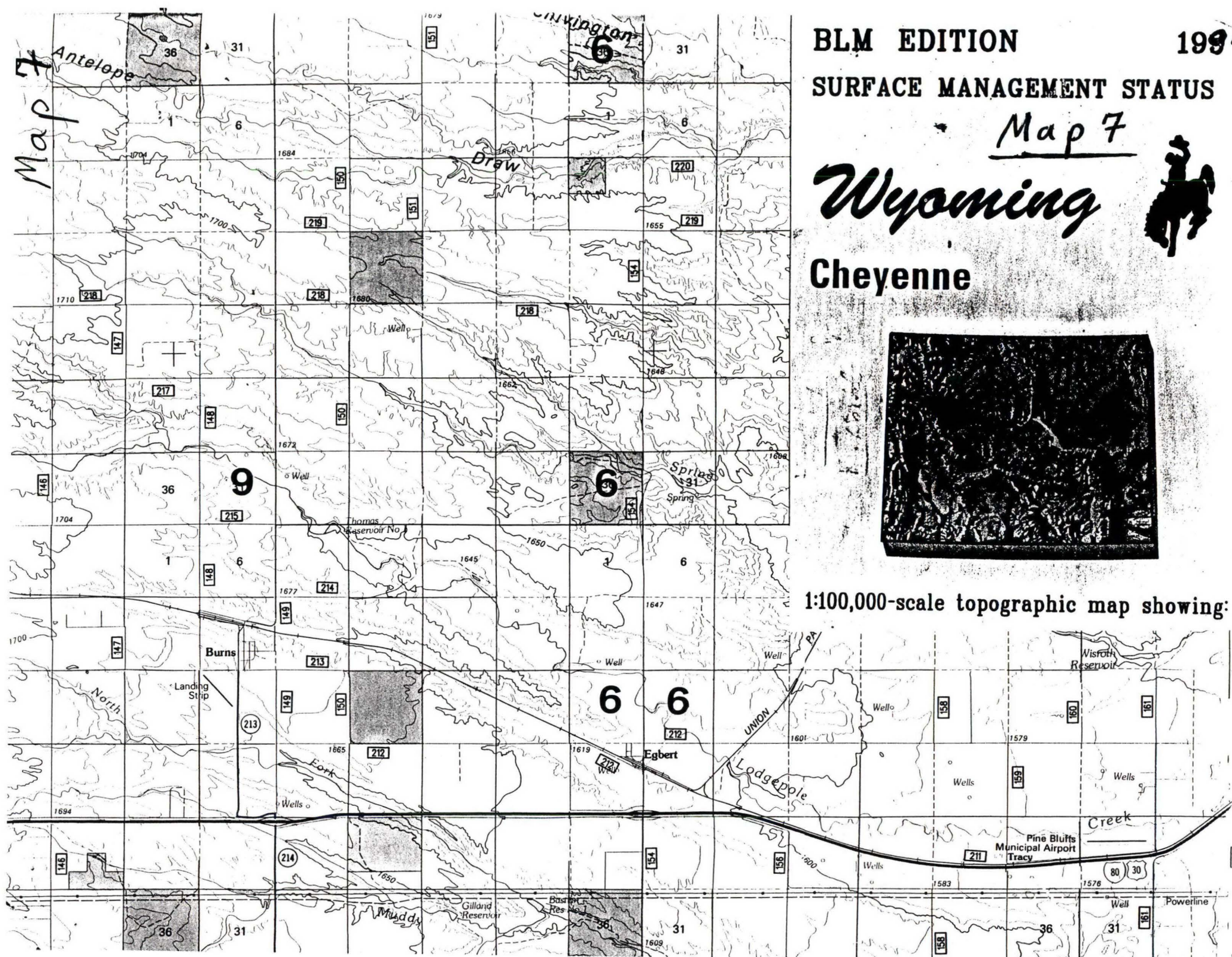
1997

Map 7

Cheyenne



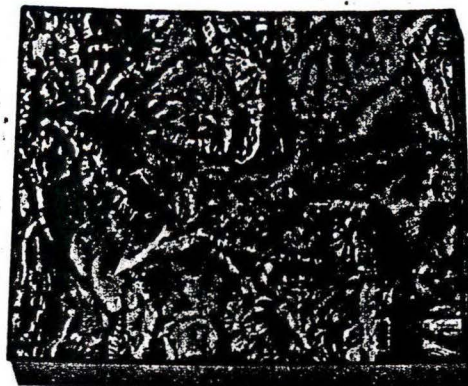
1:100,000-scale topographic map showing:





BLM EDITION 1984
SURFACE MANAGEMENT STATUS

Wyoming
Cheyenne



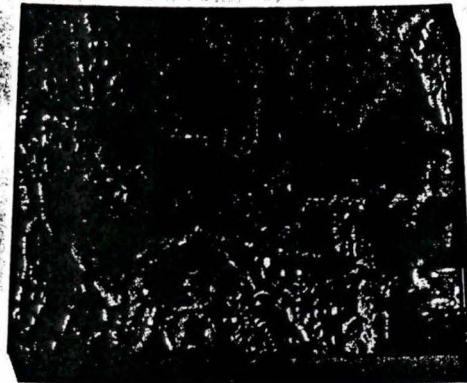
1:100,000-scale topographic map showing:

BLM EDITION

1993

SURFACE MANAGEMENT STATUS

Wyoming Chugwater



1:100,000-scale topographic map showing:

